

COMPRESSOR DEFINITION

Designation	NB T1116Y
Nominal Voltage/Frequency	200-220 V 50 Hz / 230 V 60 Hz
Engineering Number	811AK42

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	200-220 / 50	[V / Hz]	
4 Application type	Low Back Pressure		
4.1 Evaporating temperature range	-35°C to -10°C	(-31°F to 14°F)	
5 Motor type	RSIR-RSCR		
6 Starting torque	LST - Low Starting Torque		
7 Expansion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static	180 to 234 V	207 to 253 V
8.2 LBP (43°C Ambient temperature)	Static	180 to 234 V	207 to 253 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	7.7	[kgf/cm²] (109 psig)	/ °C - °F
9.2 Peak (gauge)	9.8	[kgf/cm²] (139 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	12.11	[cm³] (0.739 cu.in)
2.1 Bore [mm]	27.775	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	350	[ml] (11.84 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	10.73	[kg] (23.66 lb.)
5 Nitrogen charge	-	[kgf/cm²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	200-220 V 50 Hz/ 230 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	V230	
3 Start capacitor	-	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	T0521/07	
6 Start winding resistance	16.40	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	11.00	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[A]
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A]
11 Approval boards certification	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @200V50Hz			CECOMAFLBP Static		Evaporating temperature (Condensing temperature		-25°C (-13°F) 55°C (131°F))	
Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
502	127	147	128	0.86	1.91	3.93	0.99	1.15

E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V50Hz		CECOMAF Static			(Condensing temperature 35°C (+95°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	382	96	112	90	0.72	1.22	4.22	1.06	1.24
-30	(-22)	506	127	148	103	0.76	1.62	4.95	1.25	1.45
-25	(-13)	655	165	192	115	0.81	2.10	5.72	1.44	1.68
-20	(- 4)	836	211	245	128	0.87	2.69	6.54	1.65	1.92
-15	(+ 5)	1055	266	309	142	0.93	3.39	7.40	1.86	2.17
-10	(+14)	1318	332	386	158	1.00	4.25	8.31	2.09	2.43

TEST CONDITIONS: @200V50Hz		CECOMAF Static				(Condensing temperature 45°C (+113°F))				
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	326	82	95	92	0.72	1.13	3.53	0.89	1.04
-30	(-22)	443	112	130	107	0.78	1.54	4.15	1.05	1.22
-25	(-13)	580	146	170	122	0.84	2.02	4.77	1.20	1.40
-20	(- 4)	742	187	217	137	0.90	2.59	5.41	1.36	1.59
-15	(+ 5)	935	236	274	154	0.98	3.27	6.07	1.53	1.78
-10	(+14)	1166	294	342	172	1.07	4.08	6.76	1.70	1.98

TEST CONDITIONS: @200V50Hz		CECOMAF Static			(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	263	66	77	91	0.72	1.00	2.87	0.72	0.84
-30	(-22)	376	95	110	110	0.79	1.43	3.40	0.86	1.00
-25	(-13)	502	127	147	128	0.86	1.92	3.91	0.99	1.15
-20	(- 4)	647	163	190	147	0.94	2.47	4.42	1.11	1.29
-15	(+ 5)	816	206	239	166	1.03	3.13	4.91	1.24	1.44
-10	(+14)	1016	256	298	188	1.14	3.90	5.41	1.36	1.59

E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V50Hz		CECOMAF Static			(Condensing temperature 65°C (+149°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	194	49	57	88	0.71	0.82	2.22	0.56	0.65
-30	(-22)	304	77	89	110	0.79	1.28	2.70	0.68	0.79
-25	(-13)	421	106	123	133	0.89	1.77	3.13	0.79	0.92
-20	(- 4)	550	139	161	156	0.99	2.33	3.53	0.89	1.04
-15	(+ 5)	697	176	204	180	1.10	2.96	3.90	0.98	1.14
-10	(+14)	869	219	255	206	1.22	3.71	4.25	1.07	1.25

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42°		
3.2 DISCHARGE	4.94 +0.08/-0.08	[mm]	(0.194" +0.003"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted parallel to Base Plate		
3.3 PROCESS	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		